



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JASON ALBERTO
LTD 73
M60050_004066
MCAS EL TORO
SSIC NO. 5090.3.A

April 12, 1996

Joseph Joyce
BRAC Environmental Coordinator
Environment and Safety (Code 1AU)
MCAS El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

Dear Mr. Joyce:

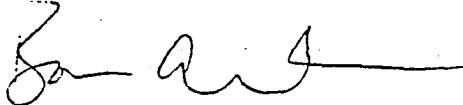
EPA has reviewed the "Draft Final Work Plan for Air Sparging Pilot Testing" and the "Draft Groundwater Extraction and Injection Well Aquifer Tests" for MCAS El Toro, received on March 27 and March 20, 1996, respectively. The following comments and those included in Enclosure A can be addressed in a letter; no revision is required for the reports. Please provide the regulatory agencies with a schedule for the field tests as soon as possible.

- 1) Page 1-4, 3rd paragraph; Please note that the test does not measure bubble surface area, a key consideration in air stripping effectiveness. Rather, the bubble flux is a measurement of the total air collected by the funnel over a fixed period of time. Preferential air flow pathways in which bubbles coalesce (thereby reducing the effectiveness of the technology) may be present and connect to the collection screen. Thus the flux could be high with VOC removal effectiveness low.
- 2) Page 5-1, Section 5.1; The establishment of baseline conditions would appear to be a key activity for the VOC vapor extraction test. The text identifies the collection of a single sample for baseline conditions. Please consider collection and analysis of several samples over several days to provide a more representative initial concentration value.
- 3) Page 5-3, Section 5.3; Since the majority of groundwater surrounding the recently sparged area will be contaminated and will tend to establish equilibrium with the "clean sparged zone," it may be necessary to collect the completion groundwater sample close to the instant the sparging system is turned off.

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We appreciate the high level of cooperation from the Navy and the Navy's contractors throughout the planning for these pilot studies. If you have any questions, I can be reached at 415/744-2368.

Sincerely,



Bonnie Arthur
Remedial Project Manager
Federal Facilities Cleanup Office

Enclosure

cc: Mr. Tayseer Mahmoud, DTSC
Mr. Larry Vitale, RWQCB
Mr. Dante Tedaldi, Bechtel




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

MEMORANDUM

SUBJECT: Pilot Projects at MCAS El Toro

FROM: Herbert Levine 
Hydrogeologist, H-9-3

TO: Bonnie Arthur
RPM, H-9-1

April 5, 1996

Per your request I have reviewed both the Air Sparge Pilot Test and the Groundwater Extraction and Injection Test reports. The Air Sparge report was written by the Navy as a draft final after receiving comments from the Agencies. The Navy adequately addressed the comments presented by EPA.

The Groundwater Extraction and Injection Test Report is submitted as a draft. Below are comments generated from my review of this report.

General Comments

1. The Navy did not discuss the purpose for conducting these tests. Data obtained from pump and slug tests during the Phase I effort were presented but not discussed. Why is the Navy conducting these tests (Phase II) when this information already exists? What specifically is wrong with the data obtained during the Phase I effort? Is the Navy concerned that extraction and/or injection is not feasible at this site? If so then this should be stated.
2. It appears that what is planned here for this effort is design related. I suspect that the contractor which the Navy is using for this Phase II effort will not be the contractor who performs the design. So, this work is likely to be repeated by the design and construction engineers during RD/RA.

Specific Comments

1. Using existing information from Phase I it is possible to construct time and distance drawdown curves using the range of hydraulic conductivity values. I assume that the Navy's contractor has done this. Please specify why this data is not sufficient? Will the Navy propose another technology other than extraction dependent on the information obtained during this test?
2. Using the existing info please discuss the placement of the observation well at 20 ft'. from the pumping well. Why is the monitoring well at 50 ft'. not sufficient?
3. The proposed 100 ft'. screen length for the pumping well appears to be excessive. After reviewing the lithology logs and contaminant concentration data I would recommend that the extraction test focus on the area of concern, the first 40 to 50 ft'. below the water table. If this well has been built, I recommend using a packer during the pump test. We can expect about 5% contribution through the filter pack which is not unacceptable for design purposes. Moench type curves would be appropriate for evaluating data obtained from partially penetrating well screens.